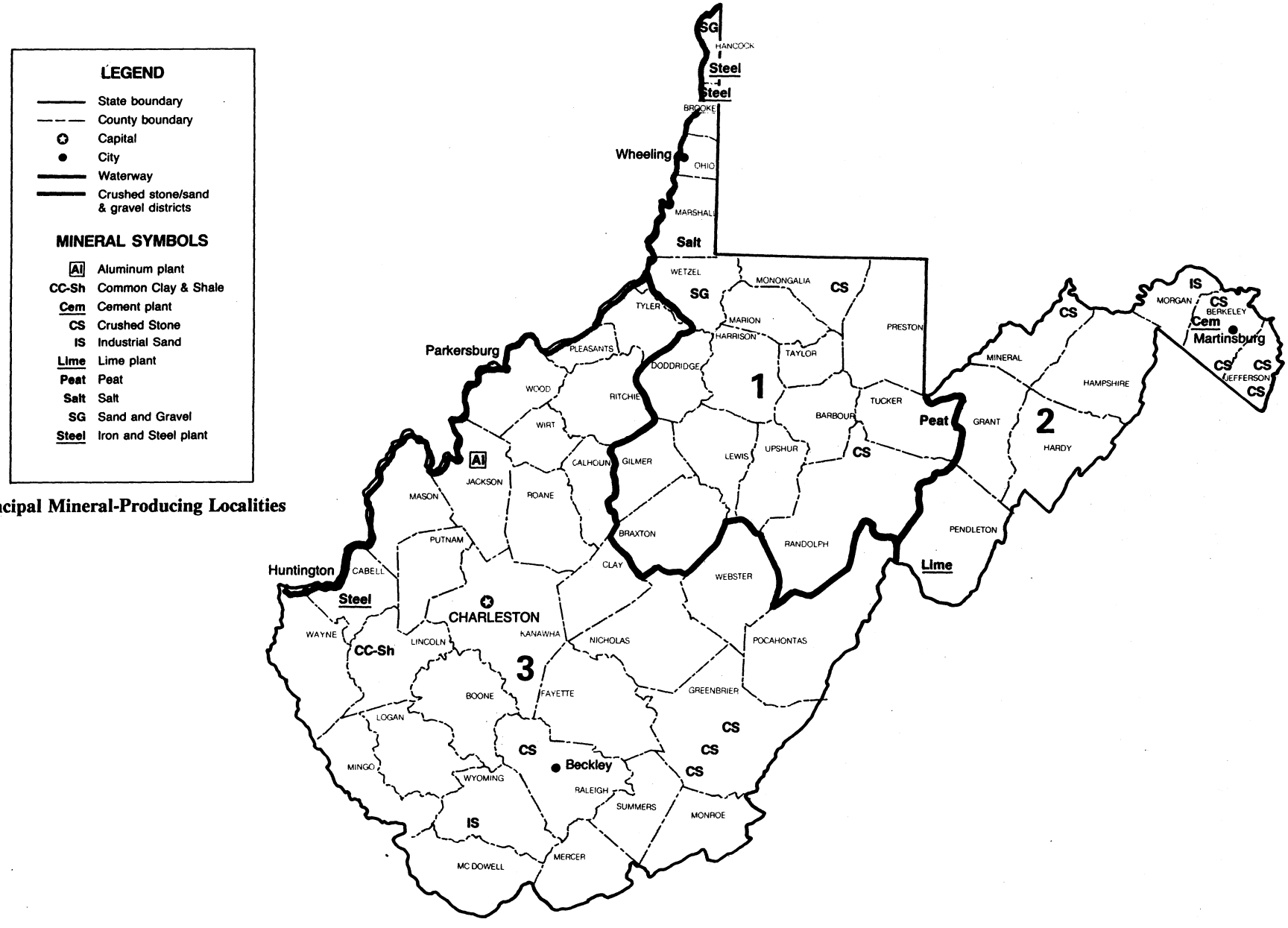
WEST VIRGINIA



THE MINERAL INDUSTRY OF WEST VIRGINIA

This chapter has been prepared under a Memorandum of Understanding between the U.S. Bureau of Mines, U.S. Department of the Interior, and the West Virginia Geological and Economic Survey for collecting information on all nonfuel minerals.

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The value of nonfuel mineral production in West Virginia in 1990 was about $136 million. Increased output of sand and gravel and crushed stone primarily accounted for a gain in value of about $11 million over that of 1989.

While West Virginia's nonfuel sector showed only a slight increase in production in 1990, the coal industry reported a fifth consecutive year of higher output. The State's steel and aluminum industries reported a decline in output.

TRENDS AND DEVELOPMENTS

Passage of amendments to the Federal Clean Air Act in 1990 was expected to impact the State's coal and limestone industries. The legislation required a 50% reduction in sulfur dioxide emissions during the next 10 years. Methods proposed for lowering sulfur dioxide emissions from powerplants included installation of coal-cleaning equipment, called scrubbers, or a switch to a lower-sulfur-content coal.

The use of scrubbers removes sulfur during coal burning with lime or limestone, was expected to increase demand for those commodities for the State's limestone industry. Coal switching in West Virginia would benefit coal producers in southern West Virginia because of the lower sulfur content coalbeds in that area. However, higher-sulfur-content coalbeds in Northern West Virginia would be expected to experience a drop in demand.

West Virginia produced about 171 million short tons of coal in 1990, according to the West Virginia Division of Energy, and ranked third nationally in output. Production was the highest since 1947 and when 173 million tons of coal was produced.

LEGISLATION AND GOVERNMENT PROGRAMS

The West Virginia Legislature, in a special session on education reform, enacted measures to generate $80 million in tax revenue. Included in the tax package was an increase of 50 cents per ton on the minimum alternative severance tax on coal.

The West Virginia Geological and Economic Survey, in cooperation with the U.S. Geological Survey, began a study on manganese in the counties of Greenbrier, Mercer, Monroe, and Pocahontas in southeastern West Virginia. Ore sampling and mapping of the area were started late in the year. A final report on the study was scheduled for completion in early 1992. The United States imports 100% of the manganese it uses, primarily from France, Gabon, and the Republic of South Africa.

In November, the U.S. Bureau of Mines awarded West Virginia State

TABLE 1
NONFUEL MINERAL PRODUCTION IN WEST VIRGINIA[1]

Mineral		1988		1989		1990	
		Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
Clays	metric tons	239,473	$586	251,385	$553	164,257	$384
Gemstones		NA	1	NA	1	NA	1
Sand and gravel (construction)	thousand short tons	1,653	6,099	e2,300	e6,700	e3,208	e14,950
Stone (crushed)	do.	e11,600	e47,600	210,904	242,538	e 212,000	e 245,200
Combined value of cement, lime, peat (1988, 1990), salt, sand and gravel (industrial), and stone (crushed granite, 1989-90)		XX	73,169	XX	75,706	XX	75,803
Total		XX	127,455	XX	125,498	XX	136,338

eEstimated. NA Not available. XX Not applicable.
[1]Production as measured by mine shipments, or marketable production (including consumption by producers).
[2]Excludes certain stones; kind and value included with "Combined value" data.

College a $50,000 grant to conduct research in human resource development in underground coal mines. The study was expected to provide information on how miners use technology in emergency situations. The work was scheduled for completion in December of 1991. The Bureau also completed a study on burnout control in Albright, Preston County. Burnout control is a process developed by the Bureau for accelerating the burning of wasted coal fires in situ in an abandoned underground coal mine or waste bank, while at the same time controlling the heat and fumes produced.[3]

REVIEW BY NONFUEL MINERAL COMMODITIES

Industrial Minerals

For the most part, little change occurred in the production of industrial minerals in West Virginia. Clays were again produced by three companies for use in brickmaking, cement manufacture, and as stemming for explosives. Cement, peat, and industrial sand were each produced by one company and salt by two. Each of these operations have established markets and remained stable in 1990.

Lime.—German Valley Limestone Co. completed installation of a new kiln at a cost of $7 million. The kiln has the capacity to produce 360 tons of quicklime per day (131,400 tons per year). Quicklime was used as a flux in steelmaking, in the bleaching process of making paper, and in treatment of acid mine drainage and wastewater.

Sand and Gravel (Construction).—Construction sand and gravel production is surveyed by the U.S. Bureau of Mines for even-numbered years only; data for odd-numbered years are based on annual company estimates. This chapter contains actual data for 1988 and 1990 and estimates for 1989.

In 1990, West Virginia produced about 3.2 million short tons of sand and gravel from nine pits and dredges.

Stone (Crushed).—Stone production is surveyed by the U.S. Bureau of Mines for odd-numbered years only; data for even-numbered years are based on annual company estimates. This chapter contains estimates for 1988 and 1990 and actual data for 1989.

Crushed stone was again the leading nonfuel mineral commodity produced in West Virginia, accounting for about one-third of the State's value. Early in 1990, the State's top stone producer, Millville Quarry Inc., completed the sale of its Jefferson County limestone operation to Evered PLC of the United Kingdom. Most of the crushed stone produced at the Millville quarry was sold in the Baltimore, MD, and Washington, DC, markets for use in construction.

Because of the continuing growth and development in the Baltimore and Washington areas, Brigham & Day Co. proposed developing a quarry on a 310-acre site in Kearneysville. In 1990, Brigham & Day submitted a mining permit application to the West Virginia Division of Energy and requested rezoning from local government. Both matters were pending at yearend.

Metals

Metals discussed in this section were processed from materials received from both foreign and domestic sources; no metals were mined in West Virginia in 1990. Production and value data for these commodities, which are not included in table 1, are given, if available.

Aluminum.—Ravenswood Aluminum Corp., Jackson County, was the State's only aluminum producer. In November, the company's labor contract expired, and a strike began that continued through yearend. In December, Ravenswood began hiring workers to replace the United Steelworkers Union employees. The plant had a capacity of about 120,000 short tons per year and employed 1,700 workers prior to the labor dispute. During the strike, Ravenswood continued to operate two of four potlines with management and replacement workers.

Iron and Steel.—Three companies manufactured steel in West Virginia: Weirton Steel Corp. and Wheeling-Pittsburgh Steel Corp., which are both integrated producers, and Steel of West Virginia, which operated a minimill. Combined output of these steelmakers accounted for less than 5% of U.S. production.

Weirton Steel, the State's top producer, reported a decline in sales from $1.3 billion in 1989 to $1.2 billion in 1990. Shipments of steel decreased to about 2.2 million short tons in 1990 from 2.5 million tons in 1989.[4] The firm also showed a loss in net income for the first time in 6 years.

Part of the loss was attributed to a capital improvement program that enabled Weirton to produce 100% of its steel using continuous casting. Before the caster project, the company produced 38% of its steel by ingotmaking and rolling process, which is more expensive because of higher energy requirements. The U.S. steel industry continuously cast almost two-thirds of its production in 1990.

A major steel galvanizing company in West Virginia, Wheeling-Nisshin Inc., began a $120 million expansion project. The firm, a joint venture of Wheeling-Pittsburgh Steel Corp. and Nisshin Steel Co. Ltd. of Japan, planned to boost the annual capacity of its Follansbee plant from 350,000 tons to 590,000 tons. The new continuous galvanizing line was expected to be in operation by 1993.

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[1]State Mineral Officer, U.S. Bureau of Mines, Pittsburgh, PA. He has 17 years of mineral-related industry and government experience and has covered the mineral activities in West Virginia for 5 years. Assistance in the preparation of the chapter was given by Sally J. Stephenson, editorial assistant.

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[3]Chaiken, R. F., and L. G. Bayles, Burnout Control at the Albright Coal Waste Bank Fire, BuMines RI 9345, 1990, 26 pp.

[4]American Metal Market. Weirton's Earnings Down 98% in 1990. V. 98, No. 232, Nov. 29, p. 3.

TABLE 2

WEST VIRGINIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1990, BY MAJOR USE CATEGORY

Use	Quantity (thousand short tons)	Value (thousands)	Value per ton
Concrete aggregates (including concrete sand)	1,373	$7,699	$5.61
Asphaltic concrete aggregates and other bituminous mixtures	335	1,286	3.84
Road base and coverings	470	1,772	3.77
Fill	274	1,269	4.63
Snow and ice control	2	4	2.00
Unspecified:[1]			
Actual	754	2,920	3.87
Total or average	3,208	14,950	4.66

[1]Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 3
PRINCIPAL PRODUCERS

Commodity and company	Address	Type of activity	County
Cement:			
Capitol Cement Corp.[1]	Box 885 Martinsburg, WV 25401	Quarry and plant	Berkeley.
Clays:			
Continental Brick Co.	Route 9, Box A1 Martinsburg, WV 25401	Pit and plant	Do.
Sanders Dummy Co.	Box 38 Midkiff, WV 25540	Pit	Lincoln.
Lime:			
Germany Valley Limestone Co.	Box 302 Riverton, WV 26814	Quarry and plant	Pendleton.
Salt:			
Hanlin Chemicals-West Virginia Inc.	Drawer J Moundsville, WV 26041	Brine wells and plant	Marshall.
PPG Industries Inc.	1 Gateway Center Pittsburgh, PA 15222	do.	Do.
Sand and gravel:			
Construction:			
Dravo Corp.	5253 Wooster Rd. Cincinnati, OH 45226	Dredge	Wetzel.
ET&S Inc.	Route 1, Box 475A Gallipolis Ferry, WV 25515	Pit	Mason.
Jesco Corp.	Route 2, Box 186-A Letart, WV 25253	Pit	Do.
Pittsburgh Sand & Gravel Inc.	Box 248 Coraopolis, PA 15108	Dredge	Brooke.
Standard-Lafarge	6715 Tippecanoe Rd. Bldg. C Canfield, OH 44406	Pit	Hancock.
Industrial:			
U.S. Silica Co.	Box 187 Berkeley Springs, WV 25411	Quarry and plant	Morgan.
Stone:			
J. F. Allen Co.	Box 49 Clarksburg, WV 26301	Quarry	Randolph.
Beckley Stone Co.	Box 1148 Beckley, WV 25801	Quarries and plants	Raleigh.
Evered Materials USA Inc. (Millville Quarry Inc.)	Box 166 Millville, WV 25432	Quarry	Jefferson.
Fairfax Sand & Crushed Stone Inc. (Laurel Sand & Gravel Inc.)	Box 719 Laurel, MD 20705	Quarries	Grant, Mineral,

[1]Also clays and crushed stone.